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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/674,201      | 12/06/2000  | Hans Hallstrom       | AN06182/3152        | 5088             |

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06/06/2002

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EXAMINER

CHIN, PETER

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 06/06/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/674,201

Applicant(s)

HALLSTROM ET AL.

Examiner

Peter Chin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2002.
- 2a) ☒ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-47, 52, 53 and 55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-47, 52, 53 and 55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 26-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flesher et al (4,702,844), Wong Shing et al (6,059,930 or 6,071,379), or Baron et al (4,894,119) taken in view of Nagarajan et al (6,007,679) or Langley et al (4,913,775) and Cauley et al (5,514,249),.

Flesher et al disclose a cationic polymer in which a hydrophobic cationic monomer, dialkylaminoalkylacrylamide or acrylate is copolymerized with a monomer free of hydrophobic groups: nonionic monomer, acrylamide. The cationic monomer is hydrophobically modified by hydrophobic hydrocarbyl attached to the quaternary or tertiary nitrogen of the cationic monomer, column 4, lines 26-42.

Wong Shing ('930) discloses a cationic dispersion copolymer of acrylamide with a cationic monomer (i) in which R<sub>4</sub> includes a hydrophobic group, propyl, column 2. Wong Shing et al ('379) similarly includes monomers having hydrophobic alkyl substituents.

Baron et al discloses cationic polymer in which either the quaternary ammonium or tertiary amine form of the aminoalkyl acrylate or acrylamide comonomer with acrylamide includes hydrophobic alkyl substituents of up to 6 C atoms, last paragraph of column 1 spanning column 2.

It would have been obvious to employ the cationic polymers of Flesher et al, Wong Shing et al or Baron et al in conventional retention systems in which cationic polymer flocculant/retention aid are used in conjunction with microparticles such as bentonite, colloidal silica and organic microparticles as exemplified by Nagarajan et al

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or Langley et al. The claimed conductivity would have been obvious since pulp furnish typically have high cationic demand due to recycling white and use of mechanical and recycled pulp as evidenced by Cauley et al, column 11.

2. Claims 46,47,52,53 and 55 are rejected under 35 U.S.C. 102(b/e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Flesher et al (4,702,844), Wong Shing et al (6,059,930 or 6,071,379).

The references as noted above show the polymer per se and thus, they anticipate the claimed invention or at the least, obvious thereover.

3. Claim 55 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "non-ionic monomer" lacks antecedent basis in claim 46.

4. Applicant's arguments have been considered. The present claims do not define over the prior art since the claims are not commensurate with the alleged showing of unexpected results. The results are shown only for specific copolymers in specific mol range of monomers, molecular weight and charge density. In regard to polymer claims, the polymers are shown by prior art as set forth in the above rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (703) 308-2046. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

A handwritten signature in black ink, appearing to read 'Peter Chin', with a long horizontal stroke extending to the right.

Peter Chin  
Primary Examiner  
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